

CLAIMS

1. A zinc and bismuth containing, water-soluble glass composition comprising from 10 to 75 mole% P_2O_5 , 5-50 mole% alkali metal oxide, up to 40 mole% ZnO and up to 40 mole% Bi_2O_3 .
2. A composition according to claim 1, wherein the mole ratio of zinc to bismuth in the composition is preferably in the range from 1:100 to 100:1 more preferably from 1:50 to 50:1, more preferably from 1:25 to 25:1 and most preferably from 1:20 to 20:1.
3. A composition according to claim 1 or 2, wherein the composition comprises up to 40 mole%, more preferably up to 35% and most preferably up to 30% of an alkali metal oxide.
4. A composition according to claim 1, 2 or 3, wherein the composition comprises more than 10 mole%, more preferably more than 15 mole% and most preferably more than 20 mole% of an alkali metal oxide.
5. A composition according to claim 3 or 4, wherein the alkali metal oxide is one or more of Li_2O , Na_2O , K_2O .
6. A composition according to any one of the preceding claims, wherein the composition comprises less than 10 mole%, more preferably less than 5 mole% and, most preferably less than 3 mole% of an alkaline earth oxide.
7. A composition according to claim 6, wherein the alkaline earth oxide is calcium oxide (CaO).

8. A composition according to any one of the preceding claims, wherein the composition comprises a refining agent.

9. A composition according to claim 8, wherein the refining agent comprises less than 10 mole% and more preferably less than 5 mole% of the composition.

10. A composition according to claim 8 or 9, wherein the refining agent is a sulphate/oxide or antimony, arsenic, cerium, manganese or an admixture thereof.

11. A composition according to any one of the preceding claims, wherein the composition comprises an oxide of an element from the group consisting of silicon, germanium, tin and lead.

12. A composition according to claim 11, wherein the amount of the silicon, germanium, tin or lead oxide is preferably less than 10 mole%, more preferably less than 5 mole% and most preferably less than 3 mole%.

13. A composition according to any one of the preceding claims, wherein the composition comprises an oxide of an element from the group consisting of gallium, aluminium and boron.

14. A composition according to claim 11, wherein the amount of the gallium, aluminium or boron oxide is preferably from 0.1 to 10 mole%, more preferably from 0.2 to 5 mole%, and most preferably from 0.3 to 3 mole%.

15. A composition comprising from 41 to 54 mole% of P_2O_5 , from 20 to 30 mole% of alkali oxides, up to 5 mole% of SO_3 , from 15 to 25 mole% of ZnO , from 0.2 to 1.5 mole% Bi_2O_3 , less than 3 mole% of alkaline-earth oxides, and from 0.3 to 3 mole% of oxides of elements selected from the group consisting of silicon, aluminium and boron .

16. A composition according to any one of the preceding claims, wherein the composition is in the form of a shaped body.

17. A composition according to any one of claims 1 to 15, wherein the composition is in a comminuted form.

18. Use of a zinc and bismuth containing, water-soluble glass composition comprising from 10 to 75 mole% P_2O_5 , 5-50 mole% alkali metal oxide, up to 40 mole% ZnO and up to 40 mole% Bi_2O_3 for inhibition of corrosion of glassware in an automatic dishwashing machine.

19. Use of a composition according to any one of claims 1 to 17 for inhibition of corrosion of glassware in an automatic dishwashing machine.